

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

QUANZ et al.

Serial No. 09/740,824

Filed: December 21, 2000



: **ATTENTION APPLICATIONS BRANCH**
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For: METHOD FOR PREPARING WATER-INSOLUBLE α -1,4-GLUCANS

SUPPLEMENTAL PRELIMINARY AMENDMENT

Commissioner for Patents
Washington D.C. 20231

Sir:

Prior to the first Official Action, and in response to the Notice of Incomplete Reply,
mailed September 24, 2001, please amend the above-identified application as follows:

IN THE ABSTRACT:

Please insert the Abstract of the Disclosure as on the accompanying separate sheet.

REMARKS

Applicants note that this Abstract was already submitted in the Preliminary Amendment dated and filed December 21, 2000, a copy of which is attached. However, in order to expedite prosecution, the Abstract is being resubmitted.

09740824-101201

No fees are believed necessary. However, please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-0436 and please credit any excess fees to such deposit account.

Respectfully submitted,

PEPPER HAMILTON LLP



Corinne M. Pouliquen
Registration No. 35,753

Hamilton Square
600 Fourteenth Street, N.W.
Washington, D.C. 20005-2004
Telephone: 202-220-1200
Facsimile: 202-220-1201

Date: Oct 12, 2001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application

Martin QUANZ *et al.*

Appl. No. *To Be Assigned* (Continuation of
Int'l. Appl. No. PCT/EP99/04199; Filed: June 17,
1999)

Filed: *Herewith*

Group Art Unit: *To Be Assigned*

Examiner: *To Be Assigned*



COPY

For: **Method For Preparing Water-Insoluble α -1,4-Glucans**

PRELIMINARY AMENDMENT

Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Sir:

Preliminary to examination of the above-referenced application, please amend the application
as follows:

IN THE SPECIFICATION:

Please amend the specification as follows:

Page 1, after the title, please add

-- Related Applications

This application is a continuation of International Application Number PCT/EP99/04199, filed
17 June 1999, which in turn claims priority from German Patent Application No. 198 27 978.1, filed
24 June 1998, both of which are incorporated herein by reference.--

After the claims please add the following:

--ABSTRACT OF THE DISCLOSURE

An in-vitro method for producing water-insoluble α -1,4-glucan is described, wherein
saccharose is reacted in a buffer-free system using an amylosaccharase.--

102707-42804-260

IN THE CLAIMS:

Please delete claims 1-8 and insert new claims 9-24 as follows:

--9. A method of preparing water-insoluble α -1,4-glucans comprising contacting a reaction mixture comprising sucrose with an enzyme having amylosucrase enzymatic activity under aqueous, buffer-free conditions to provide a product mixture comprising water-insoluble α -1,4-glucans and fructose.

10. The method of claim 9 in which the enzyme having amylosucrase enzymatic activity is an enzyme from a prokaryotic organism.

11. The method of claim 10 in which the prokaryotic organism belongs to the genus *Neisseria*.

12. The method of claim 11 in which the prokaryotic organism is *Neisseria polysaccharea*.

13. The method of claim 9 in which the enzyme having amylosucrase enzymatic activity is recombinantly produced.

14. The method of claim 9 in which the enzyme having amylosucrase enzymatic activity is substantially purified.

15. The method of claim 9 in which the enzyme having amylosucrase enzymatic activity is bound to a support material.

16. The method of claim 9 which further comprises adding an external carbohydrate acceptor to the reaction mixture.

17. The method of claim 16 in which the external carbohydrate acceptor is added at the beginning of the conversion.

18. The method of claim 17 in which the external carbohydrate acceptor is selected from linear or branched polysaccharides.

19. The method of claim 18 in which the external carbohydrate acceptor is selected from dextrin, glycogen, or amylopectin.

20. A method of preparing water-insoluble α -1,4-glucans comprising contacting sucrose with an amylosucrase under aqueous, buffer-free conditions to provide water-insoluble α -1,4-glucans and fructose.

21. The method of claim 20 in which the amylosucrase is from a prokaryotic organism.

22. The method of claim 21 in which the prokaryotic organism belongs to the genus *Neisseria*.

23. The method of claim 22 in which the prokaryotic organism is *Neisseria polysaccharea*.

24. The method of claim 20 in which the amylosucrase is designated (E.C. 2.4.1.4).--

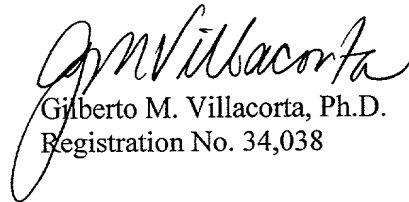
AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for this Amendment, or credit any overpayment to deposit account no. 50-0436.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to deposit account no. 50-0436.

Respectfully Submitted,

PEPPER HAMILTON LLP


Gilberto M. Villacorta, Ph.D.
Registration No. 34,038

Hamilton Square
600 Fourteenth Street
Washington, DC 20005
Telephone: (202) 220-1200
Facsimile: (202) 220-1665
Date: December 21, 2000